



Casey Rauch, P.E.
Vice President
Rauch Inc.
106 N. Harrison St.
Easton, MD 21601

March 9, 2023

Sea Level Rise Commission
Town of St. Michaels
300 Mill Street
St. Michaels, MD 21663

Dear Sea Level Rise Commission,

Rauch Inc. has determined that increasing Mill Street to elevation 5' (NAVD88), which is approximately a max increase of 3 feet at its highest, is feasible. The concept plan for raising Mill Street to elevation 5' (3-8-2023) has an estimated hard cost of \$681,505, which is \$42,743 less than the elevation 6' scenario of \$724,248. An itemized estimate of hard costs is provided at the end of this letter as Appendix A. Please note that cost estimates are not final and will change and update to reflect the final engineered designs, as well as the current cost of materials.

A 5-foot-wide brick sidewalk is feasible on the north side of Mill Street. Prior Hydrologic and Hydraulic (H&H) modeling has determined that the existing road culvert should *not* be replaced with a new tidal flap gate and tidal vault box but rather maintain and enhance the open culvert system. The rationale for an open culvert system is that prior H&H modeling has revealed there would be adverse flooding impacts to the adjacent properties, especially the Maritime Museum property. Additionally, there is not enough space for a potential bioretention expansion in the existing drainage ditch to accommodate the stormwater flooding that would occur.

Review of 4 Mill Street Study Areas

Study Area 1 – Existing Museum Building Infrastructure Tie-in:

Study area 1 encompasses the existing museum buildings along the north side of Mill St and present challenges, such as: 1) how to handle drainage around the existing shed near the gravel access road; 2) how to maintain Museum garage access with the road raised to elevation 5' while also constructing a new brick sidewalk in front of the garage, and; 3) how to incorporate the existing concrete sidewalk transitioning into a ramp and loading dock on the large maritime museum building to the northwest and its foundation landscaping area.

#1: In previous conversations with Maritime Museum representatives, Rauch understands that the Maritime Museum may consider demolishing and removing the existing shed on the southeast corner of the museum's garage, next to the gravel access road. In the current concept plan, the existing shed

footprint is drawn for context, but the plan anticipates and proposes that this shed is to be removed. By removing the shed, an access ramp is constructed to maintain access between Mill Street and the museum's gravel access road. A retaining wall on the northern edge of the ramp is proposed to support not only the access ramp but also extended to support Mill Street and the proposed sidewalk. A 4" PVC pipe underneath the access ramp is installed to intercept any drainage on the backside of the ramp.

#2: To connect and maintain access from the existing museum garage to the proposed road and sidewalk, Rauch proposes a 4-foot-high retaining wall along the northern outside edge to support both the raised road and the brick sidewalk. The retaining wall has been priced to be erected with concrete blocks, have a poured concrete footer, with a brick façade on all wall faces, and an additional 2-foot-high metal hand railing on top of the retaining wall for pedestrian safety along the brick sidewalk section. This concept mitigates on-site drainage hazards by re-grading and re-paving the area in front of the garage to create positive drainage away from the garage and flow to a valley gutter along the base of the retaining wall, releasing at the toe of the access ramp and the 4" PVC pipe under the ramp towards the drainage ditch.

#3: The larger existing museum building to the northwest that abuts the main entrance, has an existing concrete sidewalk transitioning into a ramp and loading dock. Tying this corner into the proposed road is possible but would require removing the foundation landscaping in the front and increasing the grade on the outside of the building for positive drainage. Fortunately, the building has enough height remaining in the concrete foundation wall that soil could be raised and placed along it. The current concept plan reflects this scenario. The plan also proposes a curb inlet at the corner of this entrance where the sidewalk turns into the concrete ramp. This curb inlet would intercept drainage coming down Mill Street and discharge to a proposed culvert pipe. Immediately after this proposed curb inlet, the new road would transition from a crowned road to a -1% pitched road, where sheet flow would move from the north side of Mill Street towards the south side of Mill Street towards the tidal gut.

Study Area 2 – Residential Driveway Tie-in:

Raising Mill St to elevation 5' would require extending access ramps to the adjacent residents' driveways on the south side of Mill St. The current concept plan proposes new access ramps for the adjacent driveways along Mill Street. Culvert pipes are proposed underneath these driveways that would maintain drainage towards the tidal gut. The proposed road's side slope embankments were designed at a 4:1 slope on the south of Mill St.

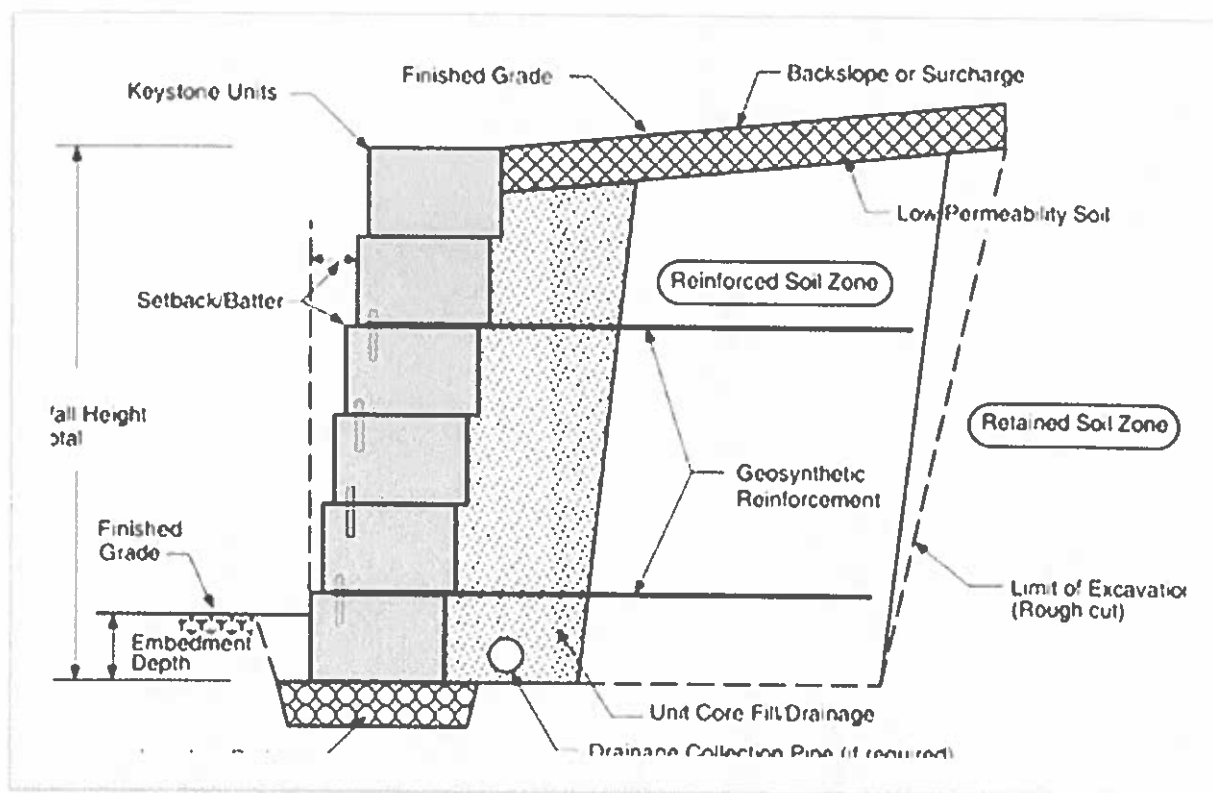
Property corners will need to be identified to confirm the actual Right-of-Way limits. The residents and the Town will lose the bordering trees within the embankment's footprint and the existing utility infrastructure will need to be raised as well and service maintained.

Study Area 3 – Road Embankment & Retaining Wall Connection to Bulkhead:

In previous concept plans and analyses, Rauch determined that the bottom of the embankment graded at a minimum 3:1 slope from the top of the road at elevation 6', would surpass the existing bulkhead footprint. This is still the case with Mill St at elevation 5'. Therefore, a retaining wall or another alternative is still needed on the south side of Mill St. After further investigation with geotechnical and marine consultants, Rauch recommends modifying the existing bulkhead to incorporate a low retaining wall on the backside of the existing bulkhead. This proposal anticipates needing a cofferdam and pumps to dry out the area in front of the bulkhead to replace the existing culvert. The proposed work also anticipates removing the

wooden cap covering the top of the bulkhead's corrugated metal sheeting, pouring a concrete footer on top of the metal sheeting, and building a low 18-24" segmental retaining wall. The existing bulkhead pilings and reinforced soldier pilings are in good condition and would remain in place. See example pictures of a segmental retaining wall and a section view below.





Study Area 4 – Existing Brick Sidewalk Tie-in

Study area 4 presents an opportunity to tie into the existing infrastructure of Mill Street, namely the existing brick sidewalk landing welcoming visitors to the Maritime Museum from the museum's main parking lot. This section of Mill Street is already higher in elevation than most of Mill Street and serves as a transition section joining the proposed road raised to elevation 5' to the remaining planned section of Mill St.

This transition section has been left intact to allow for easier abridgement to future phases of road reconstruction with the rest of Mill and Burn Streets, which would help mitigate additional costs and disturbance. The current elevation 5' concept plan shows this transition area possibility.

Potential Obstacles Identified

Raising Mill Street to Elevation 5' will bring the road closer to the existing overhead electric lines. A height restriction may need to be maintained between the road and the electric lines. This may necessitate raising the electric wires and/or poles altogether to maintain that separation in vertical height clearance, and hence, creating additional costs, permitting time, and collaboration with utility companies. This will have to be addressed in the next phase of design.

The existing concrete driveway of the museum's garage entrance has several cracks and dirt concentrating around a very slight elongated depression. This is an indication that either drainage is ponding and not escaping the area quick enough, or a potential underground utility failure is present. A new survey and collaboration with utilities will need to investigate and inspect this area much more in-depth before beginning a formal design.

In summary, Rauch is confident that raising Mill Street to elevation 5', from approximately the beginning of the Maritime Museum's property on the west to approximately the beginning of the existing brick section at the Maritime Museum's parking lot, is feasible. Challenges have been identified and addressed with corresponding solutions.

The next step Rauch recommends to the Sea Level Rise Commission is to commission a set of design construction plans suitable for bid. Estimated design cost for this plan set are provided for your consideration:

- 1) Geotechnical Investigation: \$10,000
- 2) Design Development: Engineered Designs, Construction Drawings, & Permitting: \$20 – 40,000

Please feel free to reach out to me with further questions.

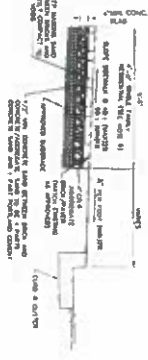
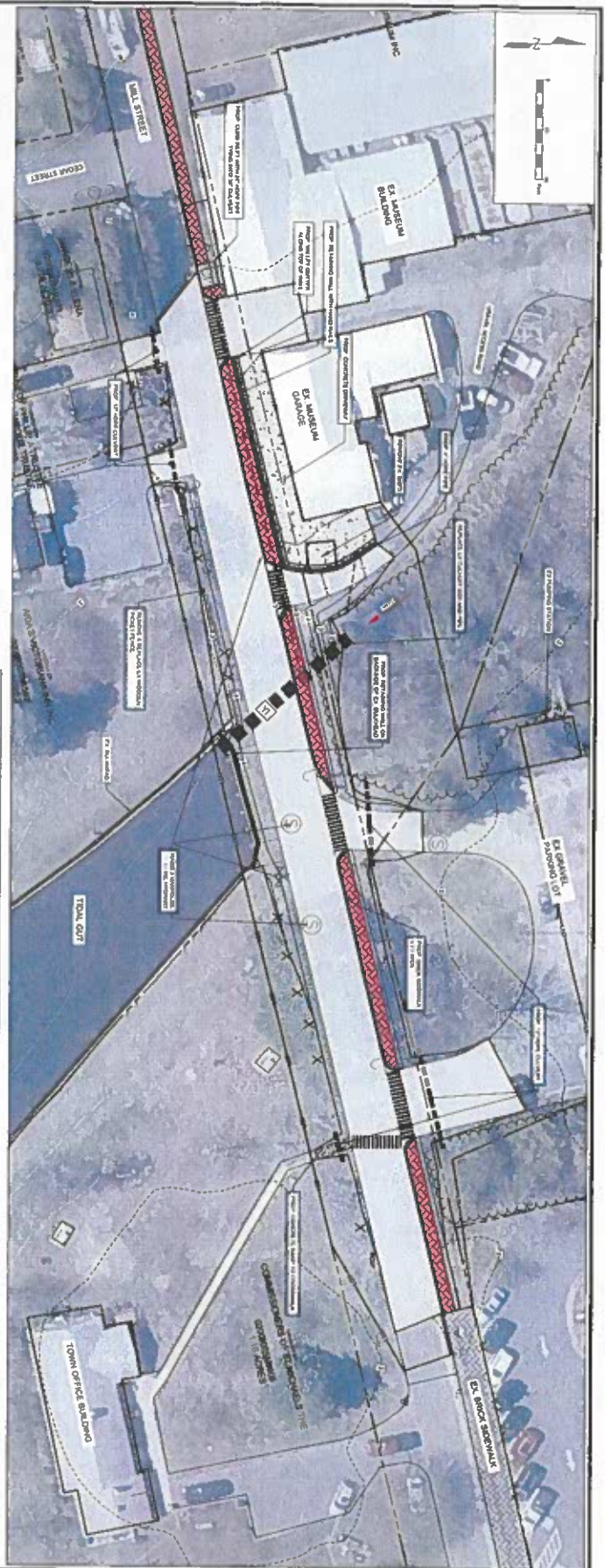
Sincerely,



Casey Rauch, P.E.

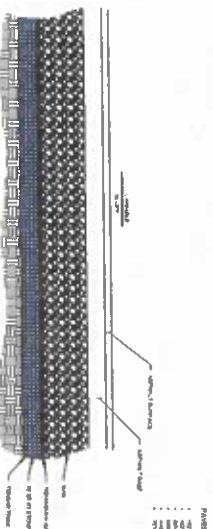
Appendix A: Hard Cost Estimate for Mill Street raised to Elevation 5'

ITEM	QUANTITY	UNIT OF MEASUREMENT	UNIT PRICE COST	TOTAL COST
GENERAL CONDITIONS				
MOBILIZATION / DE-MOBILIZATION	1	LS	\$ 30,000.00	\$ 30,000.00
STAKEOUT AND AS-BUILTS	1	LS	\$ 7,500.00	\$ 7,500.00
SCE (NOT SHOWN FOR CLARITY)	2	LS	\$ 2,500.00	\$ 5,000.00
SILT FENCE (NOT SHOWN FOR CLARITY)	718	LF	\$ 4.00	\$ 2,872.00
COFFER DAM FOR BULKHEAD WORK (NOT SHOWN FOR CLARITY)	1	LS	\$ 40,000.00	\$ 40,000.00
TRAFFIC CONTROL	1	LS	\$ 2,500.00	\$ 2,500.00
DEWATERING 2" SUMPS (NOT SHOWN FOR CLARITY)	1	LS	\$ 7,500.00	\$ 7,500.00
YARD INLET PROTECTION (NOT SHOWN FOR CLARITY)	1	EA.	\$ 1,200.00	\$ 1,200.00
ASPHALT MILL (SY PER INCH X 3 INCHES OF MILLING) - 9,291 SF (ROAD) + 1,545 SF (MUSEUM DRIVEWAYS)	1,204	SY	\$ 3.00	\$ 10,836.00
				\$ 107,408.00
DEMOLITION				
REMOVE CONCRETE CURB AND GUTTER	274	LF	\$ 10.00	\$ 2,740.00
REMOVE WOODEN PICKET FENCE	114	LF	\$ 20.00	\$ 2,280.00
REMOVE LARGE TREES	7	EA.	\$ 2,500.00	\$ 17,500.00
REMOVE SMALL TREES	4	EA.	\$ 500.00	\$ 2,000.00
				\$ 24,520.00
PROPOSED ROAD MATERIAL INSTALLATION (13,218 SF OR 1,469 SY)				
CUT	150	CU YD	\$ 10.00	\$ 1,500.00
IMPORTED FILL FOR EMBANKMENT AND FINE GRADING (229 CY NEEDED - 73 OF CUT TO FILL REMAINING = 156 TO BE IMPORTED)	156	CU-YD	\$ 55.00	\$ 8,580.00
IMPORTED FILL UNDER DEEPEST PROPOSED ROAD SECTION (77 NEEDED, 150 CUT AVAILABLE TO FILL: 150 - 77 = 73 CY)	0	CU-YD	\$ 55.00	\$ -
NORTH SIDE RETAINING WALL WITH BRICK FAÇADE	738	SF OF FACE	\$ 65.00	\$ 47,970.00
SOUTH SIDE BULKHEAD RETAINING WALL	170	SF OF FACE	\$ 45.00	\$ 7,650.00
HAND RAIL AFIXED TO TOP OF NORTH RETAINING WALL	87	LF	\$ 50.00	\$ 4,350.00
4 FT HIGH RAILING AFIXED TO TOP OF BULKHEAD RETAINING WALL	58	LF	\$ 70.00	\$ 4,060.00
REPLACE WOODEN PICKET FENCE	114	LF	\$ 50.00	\$ 5,700.00
ALLOWANCE FOR COMPACTION TESTING AS DIRECTED	1	LS	\$ 6,000.00	\$ 6,000.00
Road Sections (8,474 SF OR 942 SY)				
ASPHALT SURFACE COURSE 1.5 INCHES	82	TN	\$ 95.00	\$ 7,785.63
ASPHALT BASE COURSE 4 INCHES	219	TN	\$ 90.00	\$ 19,668.96
GRADED AGGREGATE SUBBASE (GAB) 10.5 INCHES	574	TN	\$ 45.00	\$ 25,815.51
ASPHALT STABILIZATION FABRIC 1 LAYER	9,182	SF	\$ 1.00	\$ 9,182.00
NO. 2 OR NO. 3 STONE 4 INCHES	219	TN	\$ 45.00	\$ 9,834.48
TENSAR TRIAX 1 LAYER - 1 ROLL EQUALS 3227 SF	3	EA. ROLL	\$ 868.00	\$ 2,604.00
Driveway Sections (3,927 SF OR 436 SY)				
ASPHALT SURFACE COURSE 1.5 INCHES	38	TN	\$ 95.00	\$ 3,603.54
ASPHALT BASE COURSE 4 INCHES	101	TN	\$ 90.00	\$ 9,103.68
GRADED AGGREGATE SUBBASE (GAB) 10.5 INCHES	266	TN	\$ 45.00	\$ 11,948.58
ASPHALT STABILIZATION FABRIC 1 LAYER	3,927	SF	\$ 1.00	\$ 3,927.00
NO. 2 OR NO. 3 STONE 4 INCHES	101	TN	\$ 45.00	\$ 4,551.84
TENSAR TRIAX 1 LAYER - 1 ROLL EQUALS 3227 SF	2	EA. ROLL	\$ 868.00	\$ 1,736.00
RAISE 3 MANHOLES TO FINISHED GRADE	3	EA.	\$ 750.00	\$ 2,250.00
ADJUST FIRE HYDRANT	1	EA.	\$ 750.00	\$ 750.00
ADJUST VALVE COVERS (WATER AND SEWER)	7	EA.	\$ 400.00	\$ 2,800.00
RAISE PEDESTAL	1	LS	\$ 750.00	\$ 750.00
CURB INLET	1	EA.	\$ 4,800.00	\$ 4,800.00
12" HDPE CULVERT PIPES UNDER DRIVEWAYS/RAMPS	129	LF	\$ 40.00	\$ 5,160.00
24" HDPE PIPE	160	LF	\$ 75.50	\$ 12,080.00
4" HDPE PIPE	24	LF	\$ 20.00	\$ 480.00
FURNISH AND INSTALL 1 36" BOX CULVERT/INLET/PIPE + ROAD REPAIR	1	LS	\$ 130,000.00	\$ 130,000.00
				\$ 354,641.22
SIDEWALKS INSTALLATION (2,417 SF)				
BRICK SIDEWALK (5' WIDE)	2417	SF	\$ 25.00	\$ 60,425.00
CONCRETE SIDEWALK / GARAGE DRIVEWAY	1326	SF	\$ 7.50	\$ 9,945.00
CONCRETE CURB AND GUTTER	646	LF	\$ 17.00	\$ 10,982.00
				\$ 81,352.00
SUB-TOTAL				\$ 567,921.22
20% CONTINGENCY				\$ 113,584
GRAND TOTAL				\$ 681,505



ROAD CROSS SECTION STANDARD DETAIL

N.T.S.



BRICK PAVING	EX DECORATIVE TREE	PANICLE LINE
EX BRICK PAVING	EX CONIFEROUS TREE	EX WOOD LINE
PROPOSED ROAD SECTION	888888 EX TREES	X
CONCRETE CURB & GUTTER	TO BE RAISED 2 FT	TO CLEANED
BRICK SIDEWALK	888888 EX TREES	X
CONCRETE CURB & GUTTER	TO BE RAISED 2 FT	TO CLEANED

LEGEND

BRICK PAVING	EX DECORATIVE TREE	PANICLE LINE
EX BRICK PAVING	EX CONIFEROUS TREE	EX WOOD LINE
PROPOSED ROAD SECTION	888888 EX TREES	X
CONCRETE CURB & GUTTER	TO BE RAISED 2 FT	TO CLEANED
BRICK SIDEWALK	888888 EX TREES	X
CONCRETE CURB & GUTTER	TO BE RAISED 2 FT	TO CLEANED

PROJECT ROAD COSTS

ITEM	QUANTITY	UNIT	PRICE	TOTAL
BRICK PAVING	1000	SQ YD	12.00	12000.00
CONCRETE CURB & GUTTER	100	LINEAL FT	15.00	1500.00
BRICK SIDEWALK	500	SQ YD	10.00	5000.00
CONCRETE CURB & GUTTER	50	LINEAL FT	15.00	750.00
BRICK SIDEWALK	250	SQ YD	10.00	2500.00
CONCRETE CURB & GUTTER	25	LINEAL FT	15.00	375.00
BRICK SIDEWALK	125	SQ YD	10.00	1250.00
CONCRETE CURB & GUTTER	12.5	LINEAL FT	15.00	187.50
BRICK SIDEWALK	62.5	SQ YD	10.00	625.00
CONCRETE CURB & GUTTER	6.25	LINEAL FT	15.00	93.75
BRICK SIDEWALK	31.25	SQ YD	10.00	312.50
CONCRETE CURB & GUTTER	3.125	LINEAL FT	15.00	46.875
BRICK SIDEWALK	15.625	SQ YD	10.00	156.25
CONCRETE CURB & GUTTER	1.5625	LINEAL FT	15.00	23.4375
BRICK SIDEWALK	7.8125	SQ YD	10.00	78.125
CONCRETE CURB & GUTTER	0.78125	LINEAL FT	15.00	11.71875
BRICK SIDEWALK	3.90625	SQ YD	10.00	39.0625
CONCRETE CURB & GUTTER	0.390625	LINEAL FT	15.00	5.859375
BRICK SIDEWALK	1.953125	SQ YD	10.00	19.53125
CONCRETE CURB & GUTTER	0.1953125	LINEAL FT	15.00	2.9296875
BRICK SIDEWALK	0.9765625	SQ YD	10.00	9.765625
CONCRETE CURB & GUTTER	0.09765625	LINEAL FT	15.00	1.46484375
BRICK SIDEWALK	0.48828125	SQ YD	10.00	4.8828125
CONCRETE CURB & GUTTER	0.048828125	LINEAL FT	15.00	0.732421875
BRICK SIDEWALK	0.244140625	SQ YD	10.00	2.44140625
CONCRETE CURB & GUTTER	0.0244140625	LINEAL FT	15.00	0.3662109375
BRICK SIDEWALK	0.1220703125	SQ YD	10.00	1.220703125
CONCRETE CURB & GUTTER	0.01220703125	LINEAL FT	15.00	0.18310546875
BRICK SIDEWALK	0.06103515625	SQ YD	10.00	0.6103515625
CONCRETE CURB & GUTTER	0.006103515625	LINEAL FT	15.00	0.091552734375
BRICK SIDEWALK	0.030517578125	SQ YD	10.00	0.30517578125
CONCRETE CURB & GUTTER	0.0030517578125	LINEAL FT	15.00	0.0457763671875
BRICK SIDEWALK	0.0152587890625	SQ YD	10.00	0.152587890625
CONCRETE CURB & GUTTER	0.00152587890625	LINEAL FT	15.00	0.02288819453125
BRICK SIDEWALK	0.00762939453125	SQ YD	10.00	0.0762939453125
CONCRETE CURB & GUTTER	0.000762939453125	LINEAL FT	15.00	0.011444096875
BRICK SIDEWALK	0.003814697265625	SQ YD	10.00	0.03814697265625
CONCRETE CURB & GUTTER	0.0003814697265625	LINEAL FT	15.00	0.005722046875
BRICK SIDEWALK	0.0019073486328125	SQ YD	10.00	0.019073486328125
CONCRETE CURB & GUTTER	0.00019073486328125	LINEAL FT	15.00	0.0028610234375
BRICK SIDEWALK	0.00095367431640625	SQ YD	10.00	0.0095367431640625
CONCRETE CURB & GUTTER	9.5367431640625E-5	LINEAL FT	15.00	0.0014305115625
BRICK SIDEWALK	4.76837158203125E-5	SQ YD	10.00	0.000476837158203125
CONCRETE CURB & GUTTER	4.76837158203125E-6	LINEAL FT	15.00	7.15255734375E-5
BRICK SIDEWALK	2.384185791015625E-6	SQ YD	10.00	2.384185791015625E-5
CONCRETE CURB & GUTTER	2.384185791015625E-7	LINEAL FT	15.00	3.5762786865625E-6
BRICK SIDEWALK	1.1920928955078125E-7	SQ YD	10.00	1.1920928955078125E-7
CONCRETE CURB & GUTTER	1.1920928955078125E-8	LINEAL FT	15.00	1.78813934328125E-8
BRICK SIDEWALK	5.9604644775390625E-9	SQ YD	10.00	5.9604644775390625E-9
CONCRETE CURB & GUTTER	5.9604644775390625E-10	LINEAL FT	15.00	8.94069671630859375E-10
BRICK SIDEWALK	2.98023223876953125E-10	SQ YD	10.00	2.98023223876953125E-10
CONCRETE CURB & GUTTER	2.98023223876953125E-11	LINEAL FT	15.00	4.470353358154296875E-11
BRICK SIDEWALK	1.490116119384765625E-11	SQ YD	10.00	1.490116119384765625E-11
CONCRETE CURB & GUTTER	1.490116119384765625E-12	LINEAL FT	15.00	2.23517417852703125E-12
BRICK SIDEWALK	7.450580596923828125E-13	SQ YD	10.00	7.450580596923828125E-13
CONCRETE CURB & GUTTER	7.450580596923828125E-14	LINEAL FT	15.00	1.117587089538564453125E-13
BRICK SIDEWALK	3.7252902984619140625E-14	SQ YD	10.00	3.7252902984619140625E-14
CONCRETE CURB & GUTTER	3.7252902984619140625E-15	LINEAL FT	15.00	5.58793544769237109375E-15
BRICK SIDEWALK	1.86264514923095703125E-15	SQ YD	10.00	1.86264514923095703125E-15
CONCRETE CURB & GUTTER	1.86264514923095703125E-16	LINEAL FT	15.00	2.793967723846435546875E-16
BRICK SIDEWALK	9.31322574615478515625E-17	SQ YD	10.00	9.31322574615478515625E-17
CONCRETE CURB & GUTTER	9.31322574615478515625E-18	LINEAL FT	15.00	1.3969838619232177734375E-17
BRICK SIDEWALK	4.656612873077392578125E-18	SQ YD	10.00	4.656612873077392578125E-18
CONCRETE CURB & GUTTER	4.656612873077392578125E-19	LINEAL FT	15.00	6.9849193096160888671875E-19
BRICK SIDEWALK	2.3283064365386962890625E-19	SQ YD	10.00	2.3283064365386962890625E-19
CONCRETE CURB & GUTTER	2.3283064365386962890625E-20	LINEAL FT	15.00	3.49245965480794443359375E-20
BRICK SIDEWALK	1.16415321826934814453125E-20	SQ YD	10.00	1.16415321826934814453125E-20
CONCRETE CURB & GUTTER	1.16415321826934814453125E-21	LINEAL FT	15.00	1.746229827404022116796875E-21
BRICK SIDEWALK	5.82076609134674072265625E-22	SQ YD	10.00	5.82076609134674072265625E-22
CONCRETE CURB & GUTTER	5.82076609134674072265625E-23	LINEAL FT	15.00	8.73114913701911108403125E-23
BRICK SIDEWALK	2.910383045673370361328125E-23	SQ YD	10.00	2.910383045673370361328125E-23
CONCRETE CURB & GUTTER	2.910383045673370361328125E-24	LINEAL FT	15.00	4.36557456851005554203125E-24
BRICK SIDEWALK	1.4551915228366851806640625E-24	SQ YD	10.00	1.4551915228366851806640625E-24
CONCRETE CURB & GUTTER	1.4551915228366851806640625E-25	LINEAL FT	15.00	2.1827872842550278209375E-25
BRICK SIDEWALK	7.2759576141834259033203125E-26	SQ YD	10.00	7.2759576141834259033203125E-26
CONCRETE CURB & GUTTER	7.2759576141834259033203125E-27	LINEAL FT	15.00	1.091393642127513885546875E-26
BRICK SIDEWALK	3.63797880709171295166015625E-27	SQ YD	10.00	3.63797880709171295166015625E-27
CONCRETE CURB & GUTTER	3.63797880709171295166015625E-28	LINEAL FT	15.00	5.4569682106375694275390625E-28
BRICK SIDEWALK	1.818989403545856475830078125E-28	SQ YD	10.00	1.818989403545856475830078125E-28
CONCRETE CURB & GUTTER	1.818989403545856475830078125E-29	LINEAL FT	15.00	2.7284841053187847137453125E-29
BRICK SIDEWALK	9.094947017729282379150390625E-30	SQ YD	10.00	9.094947017729282379150390625E-30
CONCRETE CURB & GUTTER	9.094947017729282379150390625E-31	LINEAL FT	15.00	1.36424205265939235687265625E-30
BRICK SIDEWALK	4.5474735088646411895751953125E-31	SQ YD	10.00	4.5474735088646411895751953125E-31
CONCRETE CURB & GUTTER	4.5474735088646411895751953125E-32	LINEAL FT	15.00	6.8212102632969617843625E-32
BRICK SIDEWALK	2.27373675443232059478759765625E-32	SQ YD	10.00	2.27373675443232059478759765625E-32
CONCRETE CURB & GUTTER	2.27373675443232059478759765625E-33	LINEAL FT	15.00	3.41060513164848089218125E-33
BRICK SIDEWALK	1.136868377216160297393798828125E-33	SQ YD	10.00	1.136868377216160297393798828125E-33
CONCRETE CURB & GUTTER	1.136868377216160297393798828125E-34	LINEAL FT	15.00	1.705302565872240446090625E-34
BRICK SIDEWALK	5.684341886080801486968994140625E-35	SQ YD	10.00	5.684341886080801486968994140625E-35
CONCRETE CURB & GUTTER	5.684341886080801486968994140625E-36	LINEAL FT	15.00	8.526512829121202230453125E-36
BRICK SIDEWALK	2.8421709430404007434844970703125E-36	SQ YD	10.00	2.8421709430404007434844970703125E-36
CONCRETE CURB & GUTTER	2.8421709430404007434844970703125E-37	LINEAL FT	15.00	4.2632564145606011152265625E-37
BRICK SIDEWALK	1.42108547152020037174224853515625E-37	SQ YD	10.00	1.42108547152020037174224853515625E-37
CONCRETE CURB & GUTTER	1.42108547152020037174224853515625E-38	LINEAL FT	15.00	2.13162818728030055761328125E-38
BRICK SIDEWALK	7.10542735760100185871124267578125E-39	SQ YD	10.00	7.10542735760100185871124267578125E-39
CONCRETE CURB & GUTTER	7.10542735760100185871124267578125E-40	LINEAL FT	15.00	1.0658141036401502788069375E-40
BRICK SIDEWALK	3.552713678800500929355621337890625E-40	SQ YD	10.00	3.552713678800500929355621337890625E-40
CONCRETE CURB & GUTTER	3.552713678800500929355621337890625E-41	LINEAL FT	15.00	5.329070518200751394033203125E-41
BRICK SIDEWALK	1.7763568394002504646778106689453125E-41	SQ YD	10.00	1.7763568394002504646778106689453125E-41
CONCRETE CURB & GUTTER	1.7763568394002504646778106689453125E-42	LINEAL FT	15.00	2.664535259100375697016796875E-42
BRICK SIDEWALK	8.8817841970012523233890533447265625E-43	SQ YD	10.00	8.8817841970012523233890533447265625E-43
CONCRETE CURB & GUTTER	8.8817841970012523233890533447265625E-44	LINEAL FT	15.00	1.332267629550187848508203125E-43
BRICK SIDEWALK	4.44089209850062616169452667236328125E-44	SQ YD	10.00	4.44089209850062616169452667236328125E-44
CONCRETE CURB & GUTTER	4.44089209850062616169452667236328125E-45	LINEAL FT	15.00	6.66133814775093924254125E-45
BRICK SIDEWALK	2.220446049250313080847263336181640625E-45	SQ YD	10.00	2.220446049250313080847263336181640625E-45
CONCRETE CURB & GUTTER	2.220446049250313080847263336181640625E-46	LINEAL FT	15.00	3.3306690738754696212708203125E-46
BRICK SIDEWALK	1.1102230246251565404236316680908203125E-46	SQ YD	10.00	1.1102230246251565404236316680908203125E-46
CONCRETE CURB & GUTTER	1.1102230246251565404236316680908203125E-47	LINEAL FT	15.00	1.6653345369377348106354296875E-47
BRICK SIDEWALK	5.5511151231257827021181583340440625E-48	SQ YD	10.00	5.5511151231257827021181583340440625E-48
CONCRETE CURB & GUTTER	5.5511151231257827021181583340440625E-49	LINEAL FT	15.00	8.326672684688674053177734375E-49
BRICK SIDEWALK	2.77555756156289135105907916702203125E-49	SQ YD	10.00	2.77555756156289135105907916702203125E-49
CONCRETE CURB & GUTTER	2.77555756156289135105907916702203125E-50	LINEAL FT	15.00	4.163336342344337026588203125E-50
BRICK SIDEWALK	1.387778780781445675529539583511015625E-50	SQ YD	10.00	1.387778780781445675529539583511015625E-50
CONCRETE CURB & GUTTER	1.387778780781445675529539583511015625E-51	LINEAL FT	15.00	2.08166817117216851330375E-51
BRICK SIDEWALK	6.938893903907228377647697917555078125E-52	SQ YD	10.00	6.938893903907228377647697917555078125E-52
CONCRETE CURB & GUTTER	6.938893903907228377647697917555078125E-53	LINEAL FT	15.00	1.0408340855860842566471875E-52
BRICK SIDEWALK	3.4694469519536141888238489587775390625E-53	SQ YD	10.00	3.4694469519536141888238489587775390625E-53
CONCRETE CURB & GUTTER	3.4694469519536141888238489587775390625E-54	LINEAL FT	15.00	5.2041704279304212832354296875E-54
BRICK SIDEWALK	1.73472347597680709441192447938876953125E-54	SQ YD	10.00	1.73472347597680709441192447938876953125E-54